

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 05-175730

(43)Date of publication of application : 13.07.1993

(51)Int.Cl.

H03D 1/00  
H03D 1/06  
H03D 1/22  
H04B 1/16  
H04B 1/18

(21)Application number : 03-342772

(71)Applicant : FUJITSU TEN LTD

(22)Date of filing : 25.12.1991

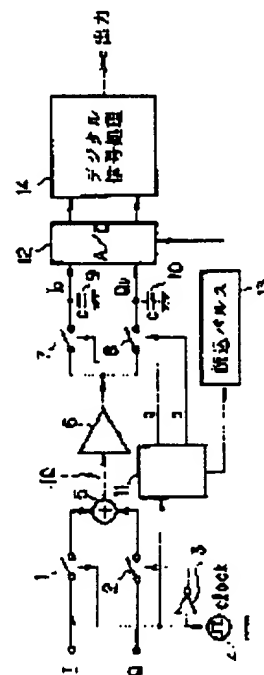
(72)Inventor : SASAKI KAZUTOSHI  
SASAKI MITSURU

## (54) TIME DIVISION DIRECT RECEIVER

### (57)Abstract:

**PURPOSE:** To reduce the distortion at demodulation by selecting alternately any of two signals subject to orthogonal transformation and whose phases differ by  $90^\circ$ , adding, synthesizing them and amplifying the result, separating the result into two signals being early and late signals timewise and replacing alternately the relation of the preceding and succeeding signals.

**CONSTITUTION:** Two signals I, Q subjected to orthogonal transformation and whose phases differ by  $90^\circ$  are switched alternately by 1st switches 1,2, and they are added and synthesized (IQ). The synthesized signal IQ is amplified at an amplifier 6 to prevent a difference from the amplification factor and the phase of the two signals. The synthesis signal IQ amplified by the amplifier 6 is subjected to orthogonal transformation through 2nd switches 7, 8 and extracted separately as signal pairs I0, Q0, stored respectively to capacitors 9, 10 and read by an A/D converter 12. The switches 7, 8 are switched so that the relation of timewise precedence/succession of the separated signals (a), (b) is alternately replaced by a return signal generating section 11. As a result, the separation signals (a), (b) whose relation of timewise precedence/succession is alternately replaced are demodulated at a digital signal processing section 14. Thus, the distortion of the signals is less than that of the signals relation of timewise precedence/succession is fixed.



## LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the

examiner's decision of rejection or application converted  
registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of  
rejection]

[Date of requesting appeal against examiner's decision of  
rejection]

[Date of extinction of right]

Copyright (C); 1998,2000 Japan Patent Office